UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/745,260	12/20/2000	Peter Phaal	21906-702	8339

7590 03/09/2006

David G. Beck
Bingham McCutchen LLP
3 Enbarcadero Center
Suite 1800
San Fransico, CA 94111

EXAMINER	
TSEGAYE, SABA	

ART UNIT	PAPER NUMBER
2662	

DATE MAILED: 03/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/745,260	PHAAL, PETER	
	Examiner	Art Unit	
	Saba Tsegaye	2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 November 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,7-26 and 28-45* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-5 and 7-13* is/are allowed.

6)☒ Claim(s) *14-20,22,26, 28-36 and 42-45* is/are rejected.

7)☒ Claim(s) *21,23-25 and 37-41* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This office action is in response to the amendment filed 11/14/05. claims 1-5, 7-26 and 28-45 are pending. Claims 1-5 and 7-13 are allowed. Claims 21, 23-25 and 37-41 are objected and claims 14-20, 22, 26-36 and 42-45 are rejected.

Drawings

2. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. Claims 14, 16-20, 22, 28-36 and 43-45 are rejected under 35 U.S.C. 102(e) as being anticipated by Hegge et al. (US 2001/0055274), hereafter referred to Hegge.

Regarding claims 14 and 28, Hegge discloses a method to monitor a network switch, comprising:

externally obtaining at least a portion of data packets received at the network switch (10), wherein each of the data packets comprises network address information (the

processor 15 identifies data flows, i.e., type of traffic, and switches packets to appropriate queues 20 according to flow and **destination**);

extracting the network address information from the obtained portion of data packets (the data packets of the various data flows are transmitted to destinations through the plurality of egress port 30; it is inherent to extract network address information in order to transmit data to the destination); and

determining port information of the network address information in response to the network address information extraction (the processor determines port information); and

performing network analysis of said network switch (a monitor device monitors specific types of traffic; 0027).

Regarding 15, Hegge discloses the method wherein port information comprises physical information (the port number corresponds to the physical port that the network switch is attached to; ingress ports 25, egress ports 30)

Regarding claims 16 and 32, Hegge discloses that said network switch having a plurality of regular ports (25, 30) and a mirror port (35), said mirror port being able to mirror network traffic for at least one of said regular ports, wherein said portion of data packets are obtained from said mirror port (the switch and the test equipment are coupled to each other (see figure 1; and 0014).

Regarding claims 17, 18, 33 and 34, Hegge discloses that said network address information comprises source address and the destination address of said mirrored data packet (packets that have been transmitted using the TCP/IP protocol and it is part of this standard to have the source and destination addresses of the packet included in each packet to allow for proper routing, thus the packets received by the monitoring device have the source and destination addresses of where that packet came from and where they are going to (see 0021 and 0028)).

Regarding claims 19 and 35, Hegge discloses the method wherein the network switch comprises a plurality of regular ports (25), wherein said portion of data packets are forwarded to said monitor device (40) by passively tapping at least one of said regular ports (data traffic through the switch to other ports is copied to the mirror port for monitoring by the IDS and the IDS itself communicates to other devices attached to the switch, for example a console, using the mirror port).

Regarding claims 20 and 36, Hegge discloses that said determining step comprising: interrogating said switch to obtain said port information using said network address information (determining whether the information is a part of particular flow of information that is a member of pre-selected group of flows of information).

Regarding claim 22, Hegge disclose the method wherein the network address information extraction and the port information determination are performed in an

external monitor device (packets are copied to monitoring device (40) for detecting port scans and flooding attack; 0014).

Regarding claim 29-31 Hegge discloses that said port information refers to physical information of said network address information in said network switch (the port number corresponds to the physical port that the network node is attached to (see figure 1)).

Regarding claim 43, Hegge discloses that said network switch is a routing switch (the switch routs packets over a switches network (see figure 1; 0016)).

Regarding claim 44, Hegge discloses the method further comprising associating the port information with information contained in the data packets ((fig.1, when traffic captured that traveled between the network devices, it is inherent to determine port information in order to forward the data packet to the destination).

Regarding claim 45, Hegge discloses the method, further comprising performing network analysis of said network switch using said port information and associated data packet information (data traffic through the switch to other ports is copied to the mirror port for monitoring by the IDS and the IDS itself communicates to other devices attached to the switch, for example a console, using the mirror port).

4. Claim 28 is rejected under 35 U.S.C. 102(e) as being anticipated by Ganesh et al. (US 2002/0067726 A1) hereafter referred to Ganesh.

Ganesh discloses, in Fig. 3, a method to monitor a network switch, comprising: externally obtaining at least a portion of data packets received at said network switch (50) wherein each of the data packets comprises network address information (search engine determine where to forward the network frame (a frame includes a destination address, a source address and a data field); extracting said network address information from the obtained portion of data packets (packet analysis and key extraction logic 64 extracts the source and destination address from the network frame and forwards the addresses to the search engine 68 and maintains the lookup table in memory 58); and determining port information of the network address information in response to the network address information extraction (forwarding decision logic 72 examines the results and applies a predetermined set of rules to determine whether the network frame should be forwarded and which port or ports it should be forwarded to (0055-0057).

5. Claims 28, 31, 33, 34, 42, and 43 are rejected under 35 U.S.C. 102(e) as being anticipated by Taylor et al. (US 6,889,245 B1).

Regarding claim 28,Taylor discloses, in Fig. 5, a controller 502, a multi-port crossbar switch 506, and buffer 508. The controller 502 controls the cross bar switch interface and the data access through the buffer. Additionally, the controller contains a look up table 504 that stores routing information such as port addresses (externally obtaining at least a portion of data packets received at said network switch, wherein each of the data packets comprises network address information). Further the controller monitors the buffered data and inspects the header information of each packet of data (claimed extracting said network address information from the obtained portion of data

packets). In response to the header information and routing information, the controller causes the buffered data to be passed through the cross bar switch interface and instructs the cross bar switch as to which port on the cross bar switch the data packet is to be routed (claimed determining port information of said network address information in response to the network address information extraction).

Regarding claim 31, the method wherein said network address information extraction and said port information determination is performed in an external monitoring device (the controller inspects the header information of each packet of data and instructs the cross bar switch as to which port on the cross bar switch the data packet is to be routed).

Regarding claims 33 and 34, Taylor discloses the method wherein the network address information comprises destination and source addresses (the controller inspects the header information of each packets of data for routing information, it is inherent that the header comprises the source and the destination addresses).

Regarding claim 42, Taylor discloses that the controller contains a look up table that stores routing information such as port addresses.

Regarding 43, Taylor discloses the method wherein the network switch is a routing switch (see fig. 5).

6. Claims 26 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hegge.

Hegge discloses all the claim limitations as stated above. Further, Hegge discloses that the processor 15 identifies data flows and queued to appropriate egress ports. However, Hegge does not expressly disclose at least one lookup table correlating the network address information with the port information. As known in the art many switching system use lookup tables to determine the routing of calls. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a lookup table in the processor of Hegge in order to determine a received packet destination and to select an egress port (0003).

Allowable Subject Matter

7. Claims 1-5 and 7-13 are allowed.

8. Claims 21, 23-25 and 37-41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

9. Applicant's arguments with respect to claims 1-5, 7-26, and 28-45 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues "although the Hegge switch presumably determines port information, such port information is not determined in response to the extraction of network address information corresponding to the port information." Examiner respectfully disagrees. Hegge discloses that processor 15 identifies data flows and switches packets to appropriate queues (appropriate egress ports) according to flow and

destination. Packets that have been transmitted using the ATM or TCP/IP protocol and it is part of this standard to have the source and destination addresses of the packet included in each packet to allow for proper routing.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saba Tsegaye whose telephone number is (571) 272-3091. The examiner can normally be reached on Monday-Friday (7:30-5:00), First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ST
March 3, 2006

Seema S. Rao 3/6/06
SEEMA S. RAO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600